

Abstract Submitted
for the DAMOP18 Meeting of
The American Physical Society

Impact of atomic Rydberg state excitation on the radiation spectrum generated in short intense laser pulses¹ JOEL VENZKE, RAN REIFF, ZETONG XUE, AGNIESZKA JARON-BECKER, ANDREAS BECKER, JILA and Department of Physics, University of Colorado, Boulder — The impact of highly excited (Rydberg) states on strong-field induced high harmonic generation and ionization has been of recent interest. Utilizing *ab initio* simulations of the Time Dependent Schrödinger Equation and systematically selecting laser intensities and frequencies, the distribution across the angular momentum states is analyzed for resonant absorption of odd and even number of photons. Furthermore, signatures of the population in the excited states in the radiation spectrum generated during the pulse and after the pulse are identified.

¹This work is supported by DOE-BES (Award No. DE-SC0001771), NSF JILA Physics Frontier Center (Grant No. PHY1734006) and AFOSR MURI (Grant No. FA9550-16-1-0121).

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Date submitted: 25 Jan 2018

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